## State of California AIR RESOURCES BOARD

## EXECUTIVE ORDER U-R-10-13

Relating to Certification of New Heavy-Duty Off-road Equipment Engines

## KOMATSU DRESSER CORPORATION

Tursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Komatsu Dresser Corp. 1999 model-year engines with rated power between 175 and 750 horsepower and exhaust emission control systems are certified as described below in heavy-duty off-road equipment:

Typical Equipment Usage:

Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set

Fuel Type:

Diesel

Engine Family		acement Cubic Inches	Exhaust Emission Control Systems and Special Features
XKDXL0505AAA (A412)	8.3	505	Charge Air Cooler Turbocharger

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards in grams per brake horsepower-hour (g/hp-h), and the opacity-of-smoke emission standards in percent (%) during acceleration (Accel), lugging (Lug), and peak (Peak) modes for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/hp-h)			Smoke Opacity (%)			
<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx, and PM exhaust emissions certification values in grams per brake horsepower-hour, and the opacity-of-smoke emissions certification values in percent for this engine family are:

Exhaust Emissions (g/hp-h)			Smoke Opacity (%)			
<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Luq</u>	<u>Peak</u>
0.3	0.6	5.5	0.2	5	2	11

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 30 day of November 1998.

R. B. Summerfield, Chief Mobile Source Operations Division

## LARGE ENGINE MODEL SUMMARY

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930 35 5 2,47 じない 3 S S 5 SAC 2222 2 2 ပ ပ 55.8 60.0 55.8 49.5 63.4 55.8 51.8 mm/stroke@peak torque A412 7.Fuel Rate: 110 125 5 110 119 127 86 86 Process Code: New Submission. 6.Torque @ RPM (SEA Gross) Manufacturer Family Name: 574@1500 642@1500 575@1500 575@1500 Z 507@1500 636@1500 610@1500 496@1600 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) 78.9 68.9 83.7 71.0 73.7 89.1 mm/stroke @ peak HP (for diesel only) 4.Fuel Rate: 106 8 99 96 87 3.BHP@RPM (SAE Gross) 173@2380 185@2200 201@2500 177@2500 215@2500 215@2200 205@2200 185@2200 EPA Engine Family: XKDXL0505AAA 2.Engine Model S6D114E-1 S6D114E-1 S6D114E-1 S6D114E-1 S6D114E-1 S6D114E-1 S6D114E-1 S6D114E-1 Manufacturer: Komatsu. 1.Engine Code CPL 2120 FR 90416 FR 90118 FR 90177 FR 90041 FR 90040 FR 90119 CPL 2185 CPL 1943 FR 90417 **CPL 2061** FR 9870

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